

REMARKS

Status of Claims

Claims 1-21 are pending. Claims 1 and 18 are independent. No claims are currently amended. All claims are believed to be allowable.

Rejections under 35 U.S.C. §102(e) as anticipated by SEIDEL et al (US 6,658,005) and under 35 U.S.C. §103(a) as unpatentable over SEIDEL et al in view of Persson et al (US 6421803)

The Examiner has rejected claims 1-21 under SEIDEL and/or Persson. Applicants respectfully traverse this rejection and request reconsideration of the rejections because SEIDEL and Persson, neither alone nor in combination, neither explicitly nor implicitly, discloses, anticipates, suggests, teaches or renders obvious all of the features of the claims.

SEIDEL merely discloses a hybrid ARQ method for packet data transmission wherein previously transmitted packets are combined with retransmitted packets where the object is to provide a HARQ method with less signaling overhead and low implementation complexity (see col 2, lines 21-23). This disclosure is not even remotely similar to the Applicants' claimed unique features.

Regarding claim 1, the Examiner cited column 2 lines 26-28 and column 7 lines 62-65 of SEIDEL as disclosing a physical layer for 1) receiving the control message and the data from the control channel and the data channel respectively and for 2) decoding the received control message and data. However, column 2 lines 26-28 of SEIDEL indicates that SEIDEL invention merely overcomes the problems of the prior art since a sequence number is transmitted over a separate control channel. Column 7 lines 62-65 of SEIDEL merely indicates that if incremental redundancy is used, different logical channels are passed as separate transport channels to the physical layer.

Based upon these cited portions of SEIDEL, it is not seen how SEIDEL et al. could anticipate a *physical layer for receiving the control message and the data from the control channel and the data channel respectively and for decoding the received control message and data*, as recited in claim 1. More specifically, the cited portions of SEIDEL and surrounding text are discussing aspects of SEIDEL relate to transmission and not reception. For example, column

2 lines 26-28 includes the word “transmitted.” Further, column 7 line 50 clearly identifies passing something to the physical layer for “transmission.”

Still further, the Examiner does admit that SEIDEL does not disclose *a physical layer’s HARQ controller* and asserts that it is an inherent element based on SEIDEL’s disclosure. The Applicants respectfully argue that this unique feature is not inherent from SEIDEL’s disclosure. Specifically, while SEIDEL et al. makes reference to the term “physical layer,” SEIDEL et al. in no way teaches or suggests that the physical layer either receives or decodes a control message and data. SEIDEL does not teach, disclose or suggest, explicitly or implicitly, *a physical layer’s HARQ controller for processing a result of the decoding of at least one of the received control message and data and for controlling the physical layer according to a result of the processing*. To support the assertion, the Examiner states that it would have been obvious to receive data at a physical layer and to process the data with a HARQ controller communicating with the physical layer. The Applicants respectfully assert that the Examiner’s obviousness reasoning to support an assertion of inherency is improper for a rejection under 35 USC § 102. For a proper rejection under 35 USC § 102, each and every claim must either be disclosed or be inherent. In this case, the Examiner admits that the elements are not taught by SEIDEL. The Applicants, on the other hand, assert that the elements are not inherent based on SEIDEL’s disclosure. The mere fact that the Examiner admits that SEIDEL does not teach an element coupled with a secondary reference necessarily implies that the rejection under 35 USC § 102 is improper and unwarranted.

One of the features of the Applicants claims is that the HARQ controller is in a physical layer, which the Examiner has acknowledged is not taught in the prior art. The prior art merely discloses a HARQ controller that is in a MAC layer, not in a physical layer, whereas the Applicants’ claims describe the operations of HARQ in a physical layer, which are not suggested in the prior art. For example, in Fig. 2 of this application, the functions in a MAC layer can be performed by using software, such as program, whereas functions in a physical layer may require operations such as exact timing and performance in response to the request from the system. The claims describe a physical layer’s HARQ controller. One of ordinary skill in the art would not have considered that the operations of a HARQ controller perform in a physical layer, nor would it have been obvious at the time of the invention.

Accordingly, Applicants respectfully request the Examiner to withdraw the rejection under § 102 for at least these reasons.

The remaining disclosure of SEIDEL et al. at best discloses the reception and decoding of a control message and data. However, SEIDEL et al. neither implicitly nor explicitly discloses a physical layer for the reception and decoding of a control message and data. Therefore, SEIDEL fails to teach *a physical layer for receiving the control message and the data from the control channel and the data channel respectively and for decoding the received control message and data*.

The Examiner attempts to cure SEIDEL's deficiencies by asserting the Persson reference under 35 USC § 103(a). The Applicants respectfully traverse this rejection. Persson merely teaches a method for performing error detection on received data packets and error correction on only those data packets that were received in error without the need for retransmission of data packets. See Persson, Abstract section. The Examiner cited col 4, lines 48-52 which discloses a physical layer of the transmitter to transmit DUs containing the data over communications channel to the receiver, the communications channel between the transmitter and receiver used to transmit the data may introduce a number of errors into the transmitted data. However, this teaching is not equivalent to any part of Applicants' claimed invention. It is unclear which claim limitation the Examiner is attempting to reject using Persson's disclosure. The Applicants assume that the Examiner is using Persson to make up for SEIDEL's explicit deficiencies and teach a physical layer's HARQ controller. If so, the Applicants assert that Persson's disclosure merely teaches physical layer of the transmitter, but fails to disclose features associated with a physical layer's HARQ controller as uniquely described in claim 1.

Applicants further argue that the Examiner has not established proper motivation for the combination of SEIDEL and Persson. Specifically, it is not seen how one of ordinary skill in the art would have been motivated to combine SEIDEL and Persson by the data units of SEIDEL et al. needing to be decoded. Accordingly, should the Examiner maintain the rejection the Examiner is respectfully requested to articulate in detail how the data units of SEIDEL et al. needing to be decoded motivates the combination of SEIDEL et al. and Persson teachings.

Therefore, SEIDEL and Persson, neither alone nor in combination, neither explicitly nor implicitly, discloses, anticipates, suggests, teaches or renders obvious all of the features of the

claims. Accordingly, claim 1 is allowable over SEIDEL and Persson and therefore Applicant's respectfully request withdrawal of the rejection.

Moreover, dependent claims 2-17 are allowable for the reasons given above by virtue of their dependence on independent claims 1.

Regarding independent claim 18, the Examiner asserts that SEIDEL teaches a HARQ controller comprising a HARQ state machine, citing to column 7, lines 35-37 and 62-65 and Figure 5. The Applicants respectfully traverse this rejection. First, the Applicants respectfully note that the Examiner, in the non-final office action on June 23, on page 11, admitted that it is not *explicitly disclosed by Seigel (sic), a HARQ controller or a HARQ state machine for receiving state information from a physical layer and determining a transition result of a next state to a state function section*. The Examiner is now stating that this feature of the Applicants' invention is taught by SEIDEL. The Applicants believe that SEIDEL does not teach the claimed features like the Examiner states in the most recent office action. SEIDEL merely teaches sending messages to a transmitter according to a RLC protocol (see SEIDEL column 7, lines 35-37) and making redundancy more efficient by connecting with the decision to use incremental redundancy to ensure that, if incremental redundancy is used, different logical channel are passed as separate transport channels to the physical layer (see SEIDEL, column 7, lines 60-65). This is not equivalent to the features as described in the claimed HARQ controller. For example, SEIDEL's sending messages and transmitting to the physical layer is not equivalent or even remotely similar to the claimed *HARQ state machine for receiving state information from a physical layer, for determining if a transition to a next state should occur and for providing a result of the determination to a state function section*. The elements of Figure 5 of Siedel also do not teach or suggest these features.

Still further, the Examiner does admit that SEIDEL does not disclose *an operation of the physical layer* and asserts that it is an inherent element based on SEIDEL's disclosure. The Applicants respectfully argue that this unique feature is not inherent from SEIDEL's disclosure. Specifically, while SEIDEL makes reference to the term "physical layer," SEIDEL in no way teaches or suggests the features relating to the physical layer as claimed in claim 18, explicitly or implicitly. To support the assertion, the Examiner states that it would have been obvious to indicate operation of the physical layer based on results of the HARQ state machine. The

Applicants respectfully assert that the Examiner's obviousness reasoning to support an assertion of inherency is improper for a rejection under 35 USC § 102. For a proper rejection under 35 USC § 102, each and every claim must either be disclosed or be inherent. In this case, the Examiner admits that the elements are not taught by SEIDEL and the Applicants assert that the elements are not inherent based on SEIDEL's disclosure. The mere fact that the Examiner admits that SEIDEL does not teach an element coupled with a secondary reference necessarily implies that the rejection under 35 USC § 102 is improper and unwarranted.

The Examiner attempts to cure SEIDEL's deficiencies by asserting the Persson reference under 35 USC § 103(a). The Applicants respectfully traverse this rejection. Persson merely teaches a method for performing error detection on received data packets and error correction on only those data packets that were received in error without the need for retransmission of data packets. See Abstract section. The Examiner cited col 4, lines 48-52 of Persson, which discloses a physical layer of the transmitter to transmit DUs containing the data over communications channel to the receiver, the communications channel between the transmitter and receiver used to transmit the data may introduce a number of errors into the transmitted data. However, this teaching is not equivalent to any part of Applicants' claimed invention. It is unclear which claim limitation the Examiner is attempting to reject using Persson's disclosure. The Applicants assume that the Examiner is using Persson to make up for SEIDEL's explicit deficiencies and teach a physical layer's HARQ controller. If so, the Applicants assert that Persson's disclosure merely teaches physical layer of the transmitter, but fails to disclose a physical layer's HARQ controller as described in claim 18.

One of the features of the Applicants claims is that the HARQ controller is in a physical layer, which the Examiner has acknowledged is not taught in the prior art. The prior art merely discloses a HARQ controller that is in a MAC layer, not in a physical layer, whereas the Applicants' claims describe the operations of HARQ in a physical layer, which are not suggested in the prior art. For example, in Fig. 2 of this application, the functions in a MAC layer can be performed by using software, such as program, whereas functions in a physical layer may require operations such as exact timing and performance in response to the request from the system. The claims describe a physical layer's HARQ controller. One of ordinary skill in the art would not

have considered that the operations of a HARQ controller perform in a physical layer, nor would it have been obvious at the time of the invention.

Applicants further argue that the Examiner has not established proper motivation for the combination of SEIDEL et al. and Persson. Specifically, it is not seen how one of ordinary skill in the art would have been motivated to combine SEIDEL and Persson by the data units of SEIDEL needed to be decoded. Accordingly, should the Examiner maintain the rejection the Examiner is respectfully requested to articulate in detail how the data units of SEIDEL needing to be decoded motivates the combination of SEIDEL and Persson teachings.

Therefore, SEIDEL and Persson, neither alone nor in combination, neither explicitly nor implicitly, discloses, anticipates, suggests, teaches or renders obvious all of the features of the claims. Accordingly, claim 1 is allowable over SEIDEL and Persson and therefore Applicant's respectfully request withdrawal of the rejection.

Moreover, dependent claims 19-21 are allowable for the reasons given above by virtue of their dependence on independent claims 18.

Additionally, the Applicant would like to respectfully point out that the obviousness rejections are improper because the Examiner fails to properly establish a rejection under 35 USC § 103. For example, the Examiner merely mentions 35 USC 103(a) in the middle of the rejection paragraph for claim 1 under 35 USC 102(e). See Office Action, page 4. As a further example, for claim 18, the Examiner does not provide a rejection paragraph under either 35 USC 102 or 103. The Examiner merely jumps into stating what SEIDEL teaches or doesn't teach and adds the Persson reference. The Applicant respectfully requests that the Examiner issue a non-final office action with proper rejections under 35 USC 102 and 103.

In all, the Applicants request the examiner to withdraw the rejections under SEIDEL and Persson for claims 1-21, and allow these claims.

Conclusion

In view of the above, it is believed that the above-identified application is in condition for allowance, and notice to that effect is respectfully requested. Should the Examiner have any questions, the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

Date: May 3, 2007

A handwritten signature in black ink, appearing to read 'Gautam Sain', written over a horizontal line.

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